

REMARKS

Favorable reconsideration of the present application is respectfully requested.

Withdrawn Claims 9-17 have been canceled and Claim 19 has been added. Applicants respectfully request that the Examiner reconsider and withdraw the rejections under 35 U.S.C. § 103.

Hatakeyama (U.S. Patent No. 6,007,969) is directed to an ultra-fine microfabrication method using an energy beam.

Hatakeyama teaches that fine structure 14 may be created by dispersing beam-shielding micro-particles 12 on a fabrication surface of target object 11 and radiating the surface with fast atomic beam (FAB) 13. See, FIG. 1; Col. 4, line 21 to Col. 5, line 50. It is apparent that Hatakeyama fails to disclose several features recited the claims as currently presented.

Hatakeyama fails to teach or suggest forming a wiring on a wiring substrate by an exposure treatment using a photomask that has a shade pattern containing nano particles, as recited by Claim 1. Instead, Hatakeyama discloses an energy beam direct-etching process that uses micro-particles applied directly to the fabrication surface. Hatakeyama simply fails to teach or suggest the use of a photomask having a shade pattern containing nano particles and a binder.

Furthermore, Hatakeyama teaches away from the use of micro-particles in photolithography and photomasking: "Even with the best of equipment, the technique is basically not adaptable to microfabrication in the range of nanometers" (Col. 1, lines 55-58). See, generally, Col. 1, line 49 to Col. 2, line 3. Consequently, the Examiner's reliance on the teachings of Hatakeyama to support his assertion that it would have been obvious "to select a photomask made of nano particles" is untenable. See, Office Action at Paragraph 3, Pages 2-3.

Moreover, none of the remaining references, taken either singly or in combination, teach or suggest these features.

Accordingly, for the reasons explained in the preceding remarks, Applicants submit that this application is in condition for allowance and should now be passed to issue.

A Notice of Allowance is respectfully solicited.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account.

If any extension of time is required in connection with the filing of this paper and has not been requested separately, such extension is hereby requested.

Respectfully submitted,

July 19, 2004

By: 

Mitchell W. Shapiro
Reg. No. 31,568

Adam M. Treiber
Reg. No. 48,000

Miles & Stockbridge P.C.
1751 Pinnacle Drive, Suite 500
McLean, Virginia 22102-3833
(703) 903-9000

#9221956v1